ABSTRACT

The present invention relates generally to a method for detecting a nucleic acid molecule having a particular nucleotide sequence. Such a nucleic acid molecule is generally referred to as the "target" sequence or molecule. The method of the present invention generally comprises the use of competitive priming of pre- or post-amplified nucleic acid molecules. The nucleic acid molecules subjected to such primer interrogation are generally immobilized to a solid support by hybridization of a target molecule to a primer anchored to a solid phase. Amplimer-mediated bridging of a particular primer, labelled or unlabelled, is then used to detect the presence of a primer having a selected sequence. The method of the present invention is useful in a range of applications including *inter alia* diagnosis, nucleotide sequencing and the screening for nucleic acid-modifying molecules such as carcinogens. The instant method may also be used to discriminate between nucleotide repeat number polymorphism including microsatellite repeat alleles occurring in a range of neurodegenerative and other disease conditions including Huntington's disease which result from or have a causative nature associated with repeat expansion. The subject method may also be used to quantitate target nucleic acid molecules. The present invention further combines the subject methodology and microchip technology to permit interrogation of target sequences in a high through-put manner.